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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,815	02/24/2004	Dietrich Scherzer	54166	1166
26474 7590 12/22/2008 NOVAK DRUCE DELUCA + QUIGG LLP 1300 EYE STREET NW SUITE 1000 WEST TOWER WASHINGTON, DC 20005				
EXAMINER				
ZEMEL, IRINA SOPHIA				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
12/22/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/784,815

**Applicant(s)**

SCHERZER ET AL.

**Examiner**

Irina S. Zemel

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1.5, 14 and 24-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1.5, 14 and 24-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5, 24-41 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6045899 to Wang et al., (hereinafter "Wang").

The rejection stands as per reasons of record.

***Claim Rejections - 35 USC § 102/103***

Claims 1, 5, 14, 24-41 re rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Patent 7,045,082 to Deitzen et al., (hereinafter Deitzen), or under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 1333051 to BASF (document corresponding to US '082 patent).

The rejection stands as per reasons of record.

***Response to Arguments***

Applicant's arguments filed 9-25-2008 have been fully considered but they are not persuasive.

The applicants argue that the Wang process does not involve introduction of gas bubbles. Thus, based on the dictionary definition of "foam" provided in the Office action, Wang's membrane is not a foam. The applicants are taking a position that once the

examiner cited a definition of a term, in this case "foam", the examiner has taken an official notice and is bound by this definition. The examiner would like to point out that the definition cited by the examiner was an exemplary definition, and it was followed by explanation what the examiner believes is the commonly accepted definition of "foam", or meaning of the term "foam" in the relevant art. The applicants, however, interpreted the phrase that foams is nothing more than cellular materials as contradictory to the exemplary definition cited and requested withdrawal of the statement explaining what, in examiner's opinion, is a polymer foam. In the examiner's opinion, the applicants present arguments that have nothing to do with the substantive rejections. The entire argument devoted to the "foam" definition is nothing more, in the examiner's opinion, than a word game and an exercise in semantics. Once again, it is the examiners position that "foam" in the art of polymers, meant "cellular" product. For that matter the applicants attention s drawn to US classification, specifically class 521, subclass 50 which reads

CELLULAR PRODUCTS OR PROCESSES OF PREPARING A CELLULAR  
PRODUCT, E.G., FOAMS, PORES, CHANNELS, ETC.

and which is the base class for all cellular polymer products regardless of the way they are obtained. It is further noted that some of the subclasses define Process of preparing a cellular product by removal of material from a solid polymer-containing matrix without expanding the matrix; composition which is nonexpandible and is designed to form a cellular product by said process; or process of preparing said composition.

It is further noted that in support of the definitions of "envelope density" and "structural material" the applicants cited three unrelated patent for definitions of "envelope density" and "structural substance". By the same token, the examiner searched the USPTO patent data base for "syntactic foams" with a result of more than 900 hits, majority referring to polymeric syntactic foams (i.e., foams obtained by removal of porogen without direct introduction of a blowing agent, and still resulting in foams having air bubbles introduced (in place of porogen) in the foam.

Insofar as the applicants insisting that the examiner relies on the definition of foam as , provided in the background section of the applicants' specification, the definition provided by the applicant is of a very generic nature, and does not specifically states that this is the definition that is adopted for the purposes of this invention as limiting the invention to specifically those kind of foams. The examiner has no authority to read any generic limitations in the claims, however, if the applicants wish to limit their claimed invention by a specific limitation, such as defining foams as materials which have open and/or closed cells distributed across their entire bulk, and which have an envelope density lower than that of the structural substance " they may do so. It is, however, noted that the membranes disclosed in Wang clearly satisfy the "envelope density lower than that of the structural substance" parameters.

Insofar as the applicants arguments that the cellular materials of Wang are not disclosed as having open cell structure with more than 75 % of cells being open, and cells being of more than 100 um, the examiner disagrees. The cellular structure is not described in words as having the claimed parameter, but it is clearly disclosed as such

on the micrographs that show open cell structure and have the size-bar for asserting the actual size of the pores. The examiners' conclusion that the cellular materials disclosed in the figures satisfies the claimed parameters is not an "Official Notice", rather it is a conclusion derived from the facts presented on the figures, all of which are made to scale and can be visually inspected (the very nature and purpose of a figure – to visually inspect and make assertion from such visual inspection). . Therefore, the applicants "demand" on the examiner to produce an authority for the fact assertion presented in the disclosure of the reference is misplaced, as the statements of the Office action have nothing to do with an "official notice".

The arguments regarding the rejection of claims over Dietzen (and its corresponding EP document), the applicants provided a declaration that the foams disclosed in the reference do not have the required percentage of open cells. The argument in the declaration is made based on the statement that the polymer used in the reference has a "comparable melting point" to the polymers used in the instant application, and, thus, the results disclosed in the reference can be directly compared to the results presented in the instant application. No actual results of the open cell content or the foams disclosed in the reference is presented in the declaration. The examiner follows the logic of the arguments presented in the declaration, however does not find it convincing. The specification clearly states that in order to obtain the required open cell content the foaming must be done at the temperature, preferable, from 2 to 20 degrees higher than the melting point of the underlying polymer. It is noted that no other guidance is given for obtaining the claimed foams of the claimed open cell

content is provided anywhere in the reference, thus effectively being the only guidance for enabling disclosure. With this regard, the evidence available to the examiner (attached MatWeb Material Data Sheets) indicates that similar grades of polysulfones denoted as 3010 or 2010 have different properties, specifically melting temperatures, even though they are comparable. Since the entire invention turns on as little as two degree difference, the statement that the melting temperatures are "comparable" is not sufficient for direct comparison of the examples of reference and the instant application. In addition, it is noted that the illustrative example of the reference specifically states that "A polyether sulfone (ULTRASON 2010 from BASF AG) is fed to the first extruder. The polymer is **melted**, and the blowing agent or the mixture of the blowing agent is injected and then mixed into **the melt**, the temperature of which is **340.degree.**" (Emphasis added). This statement clearly implies that the polymer has a T<sub>m</sub> below 340 C as is, in fact, it is already melted at 340 C. The processing or foaming conditions illustrated in the reference are 345 and above – which just exactly satisfies the conditions set forth in the instant specification for obtaining the desired open cell foams, i.e., 2-10 degrees above the melting point of the polymer. Therefore, based on the existing evidence, it is still believed that the foams disclosed in the reference are of open cell structure, and that the examples of reference and the instant application can not be directly compared over a very small temperature range and temperature differential required to obtain the foams of open cell structure as discussed in the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/  
Primary Examiner, Art Unit 1796

Irina S. Zemel  
Primary Examiner  
Art Unit 1796

ISZ